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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SAM, PHIRIN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/028,069	Applicant(s) THIPPESWAMY ET AL.	
	Examiner PHIRIN SAM	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-22 and 24-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 13-16, 22 and 24-31 is/are allowed.
- 6) ☒ Claim(s) 1, 4-10, 17, 20, 21 and 32-36 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 4, 6, 9, 10, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,937,561 (hereinafter referred "Chiussi") in view of US 2002/0057699 (hereinafter referred as "Roberts").

Regarding amended claims 1 and 6, Chiussi discloses a method for forwarding a packet upstream from a subscriber unit to a central access point, the packet including destination information and source information, the method comprising:

(a) determining a first value associated with the packet, the first value being one of a predetermined set of limited values, wherein the first value is determined using the destination information and the source information (see Fig. 3, col. 6, lined 20-553);

Chiussi does not disclose identifying a first service flow that is suitable for use to forward the packet, the first service flow being one of a set of service flows between the source and the destination, wherein the first service flow is identified using the first value associated with the packet. However, Roberts discloses identifying a first service flow that is suitable for use to forward the packet, the first service flow being one of a set of service flows between the source and the destination, wherein the first service flow is identified using the first value associated with the packet and sending the packet on the first service flow (see Fig. 4, paragraph [0057]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine identifying a first service flow that is suitable for use to forward the packet, the first service flow being one of a set of service flows between the source and the destination, wherein the first service flow is identified using the first value associated with the packet and sending the packet on the first service flow teaching by Roberts with Chiussi. The motivation for doing so would have been to provide networks with an improve quality of service based upon per-flow state information read on paragraph [0023]. Therefore, it would have been obvious to combine Roberts and Chiussi to obtain the invention as specified in the claims 1 and 6.

Regarding claim 4, Chiussi does not disclose the method further including assigning the first value to the first service flow. However, Roberts discloses including assigning the first value to the first service flow (see Fig. 4, paragraph [0051]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine including assigning the first value to the first service flow teaching by Roberts with Chiussi. The motivation for doing so would have been to provide networks with an improve quality of service based upon per-flow state

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information read on paragraph [0023]. Therefore, it would have been obvious to combine Roberts and Chiussi to obtain the invention as specified in the claim 4.

Regarding claim 9, Chiussi does not disclose the set of service flows includes up to approximately sixteen service flows. However, Roberts discloses the set of service flows includes up to approximately sixteen service flows (see Fig. 2, paragraph [0052]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the set of service flows includes up to approximately sixteen service flows teaching by Roberts with Chiussi. The motivation for doing so would have been to provide networks with an improve quality of service based upon per-flow state information read on paragraph [0023]. Therefore, it would have been obvious to combine Roberts and Chiussi to obtain the invention as specified in the claim 9.

Regarding claim 10, Chiussi discloses the packet is part of a session, the session including multiple packets, wherein each packet of the multiple packets is associated with the first value and is sent on the first service flow (see Figs. 2 and 3, col. 6, lines 20-52).

Regarding amended claims 17 and 21, Chiussi discloses a device for forwarding a packet upstream to a central access point, the packet including destination information and source information, the device comprising:

(a) means for causing a first value associated with the packet to be determined, the first value being one of a predetermined set of limited values, wherein the means for causing the first value to be determined include means for causing the destination information and the source information to be used (see Fig. 3, col. 6, lined 20-553);

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Chiussi does not disclose means for causing a first service flow that is suitable for use to forward the packet to be identified, the first service flow being one of a set of service flows between the source and the central access point, wherein the means for causing the first service flow to be identified include means for causing first service flow to be identified using the first value associated with the packet; and means for causing the packet to be sent on the first service flow. However, Roberts discloses disclose means for causing a first service flow that is suitable for use to forward the packet to be identified, the first service flow being one of a set of service flows between the source and the central access point, wherein the means for causing the first service flow to be identified include means for causing first service flow to be identified using the first value associated with the packet; and means for causing the packet to be sent on the first service flow (see Fig. 4, paragraph [0057]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine means for causing a first service flow that is suitable for use to forward the packet to be identified, the first service flow being one of a set of service flows between the source and the central access point, wherein the means for causing the first service flow to be identified include means for causing first service flow to be identified using the first value associated with the packet; and means for causing the packet to be sent on the first service flow teaching by Roberts with Chiussi. The motivation for doing so would have been to provide networks with an improve quality of service based upon per-flow state information read on paragraph [0023]. Therefore, it would have been obvious to combine Roberts and Chiussi to obtain the invention as specified in the claims 17 and 21.

4. Claims 5, 7, 8, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,937,561 (hereinafter referred "Chiussi") in view of US 2002/0057699 (hereinafter

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referred as “Roberts”) as applied to claims above, and further in view of US Patent 7,092,397 (hereinafter referred as “Chandran”).

Regarding claims 5, 7, 8, and 20, Roberts and Chiussi do not disclose the destination information is a destination Internet Protocol (IP) address and the source information is a source IP address. However, Chandran discloses the destination information is a destination Internet Protocol (IP) address and the source information is a source IP address (see Fig. 1, col. 4, lines 32-49). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the destination information is a destination Internet Protocol (IP) address and the source information is a source IP address teaching by Chandran with Roberts and Chiussi. The motivation for doing so would have been to provide to map a data packet to a MPLS/VPN tag in the CMTS read on column 2, lines 12-13. Therefore, it would have been obvious to combine Chandran, Roberts, and Chiussi to obtain the invention as specified in the claims 5, 7, 8, and 20.

5. Claims 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 7,092,297 (hereinafter referred as “Chandran”) in view of US 2003/0058889 (hereinafter referred as “Lansing”).

Regarding claims 32 and 36, Chandran discloses a device for forwarding packets to a central access point, the device comprising:

(a) a receiving component, the receiving component being arranged to receive a plurality of packets that are to be forwarded to a central access point by a DOCSIS protocol (see Fig. 1, col. 4, lines 9-39);

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- (b) a plurality of service flow identifiers which are associated with a plurality of service flows of said DOCSIS protocol (see Fig. 1, col. 4, lines 9-39);
 - (c) a routing component, the routing component being arranged to receive the plurality of packets from the receiving component (see Fig. 1, col. 4, lines 40-50);
 - (d) the routing component further being arranged to provide a plurality of packets to the plurality of service flow identifiers of said DOCSIS protocol (see Fig. 1, col. 4, lines 30-39);
- Chandran does not disclose round-robin. However, Lansing discloses round-robin (see paragraph [0048]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine round-robin teaching by Lansing with Chandran. The motivation for doing so would have been to provide to perform payload header verification, suppression, and expansion read on paragraph [0006]. Therefore, it would have been obvious to combine Lansing and Chandran to obtain the invention as specified in the claims 32 and 36.

Regarding claim 33, Chandran discloses the routing component is further arranged to provide a first packet of the plurality of packets to a first service flow identifier of the plurality of service flow identifiers and to provide an Nth packet of the plurality of packets to an Nth service flow identifier of the plurality of service flow identifiers (see Fig. 1, col. 4, lines 9-22).

Regarding claim 34, Chandran discloses the plurality of packets includes a second packet, the second packet being received by the receiving component between the first packet and the Nth packet, and wherein the routing component is further arranged not to provide the second packet to either the first service flow identifier or the Nth service flow identifier (see Fig. 1, col. 4, lines 9-21).

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Regarding claim 35, Chandran discloses the plurality of packets includes an (N+1)th packet and an (N+N)th packet, wherein the routing component is further arranged to provide the (N+ 1)th packet to the first service flow identifier and the (N+N)th packet to the Nth service flow identifier (see Fig. 1, col. 4, lines 9-21).

Allowable Subject Matter

6. Claims 2, 3, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 11, 13-16, 22, 24, 25, and 27-31 are allowed.

Response to Remarks

8. Applicant's remarks with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHIRIN SAM whose telephone number is (571)272-3082. The examiner can normally be reached on Increased Flexitime Policy (IFP) Program.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272 - 2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Respectfully submitted,

Date: November 9, 2008

By: /Phirin Sam/

Phirin Sam
Primary Examiner
Art Unit 2419